

A Mathematics Dimension of Pilgrimage

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Abstract

The concept of number in mathematics related to a calculation may be grouped into two, namely finite and infinite. Dealing with pilgrimage, the Messenger of God, Muhammad SAW, has shown such an finite or infinite calculation. Mathematic analysis is an interpretation of the calculation on merit equivalence a human being will get when he does a pilgrimage. It does not mean that if he does a pilgrimage he will be able to eliminate any obligations he should fulfil, for example, the *sholats* one should do exceeding of 100 times of the ages of a human being, also the obligatory *sholats* made in groups with value of 76.000 times than those made out of Medina and Mecca. The condition is obtained if all of them are done in order to get His blessings, and also the pilgrimage is intended to be accepted by Allah

Keywords: pilgrimage, merit, mathematics, number

Mathematics as a science is full of benefits in the society[1 2,4,7]. One of its benefits is related to the implementation of religious services that may illuminate and strengthen belief in doing God's commands. The roles of mathematics have been much described in terms of the confirmation and strengthening belief in services such as in determining the direction of *kiblat*, the times of *sholats*, of *IdhulFitri* and *IdhulAdha*, and also the fifth Islam pillar, namely pilgrimage[1, 3,10, 12].

Pilgrimage is a religious service that should be done by any Moslems (candidates of pilgrims) who fulfil the prevailed requirements and stipulations such as the costs to get to Mecca and also any knowledge[9,12,13].

Each pilgrimage activity should be based on the strong principles as stated in the *Hadits* and *Qur'an*. As a moslem, one should study principles becoming the basis for the pilgrimage. In the pilgrimage, a motivation may arise, a motivation that may encourage a moslem to be able to undergo the fifth Islam principle [5, 8, 11, 13]. In order to reveal of what is implied in the principles as a basis in the pilgrimage,

mathematics may serve this in the hope that it may improve the motivation and to strengthen the belief in doing the pilgrimage.

Discussion

A moslem should maximally try to be able to visit the *Baitullah*, and *Allah SWT* has given signs on the requirements that should be fulfilled by a moslem. Epistle *Ali Imron* 97 as stated above is used as a basis for a moslem to do a pilgrimage. An obligation to do a pilgrimage is imposed on those comprehending the rules and orders either in terms of facilities or its implementation[1,6].

As a motivation for a moslem to be willing to do a pilgrimage, matematically, *Rasulullah SAW* has provided a calculation on the strengths someone has to do the pilgrimage. In this case, he has shown a strength when one does *sholats* in two places as a part of activities in doing the pilgrimage, namely in *Nabawi* mosque and *Masjidil Haram*. In the *Hadits* above, it is said that one *sholat* in *Nabawi* mosque is 1000 better than that made other mosques, except *Masjidil Haram*. And one *sholat* in *Masjidil Haram* is 100.000 better that that in other mosques. Moreover, matematically *Rasulullah SAW* has given a calculation of the strengths when one does *sholat* in *Nabawi* mosque and *Masjidil Haram*. But it is merely the one who is willing and able to think of is to understand how huge the value is.

The concept of number in mathematics dealing with such a calculation may be grouped into two, namely finite and infinite numbers. Concerning with pilgrimage, *Rasulullah SAW* has shown the calculation, either finitely or infinitely. On the strength of doing *sholat* in *Nabawi* mosque and *Masjidil Haram*, matematically it can be analysed in terms of benefits and motivation to do it, and it is the dimension of infinite number. It means that the value can be analysed and calculation.

The Indonesian pilgrims in general may last for 40 days, for ordinary, non-plus or plus-pilgrimages, where the last is facilitated by the Saudi Kingdom. From the 40 days, if it is reduced for the time spent in the haj dormitory and the travel from Indonesia and Saudi Arabia, it can be said that the times made use of doing *sholat* in *Nabawi* mosque and *Masjidil Haram* are 8 days in Medina and 25 days in Mecca, excluding activities in *Arofah* and *Mina*. Some say that activities in the two places include those in *Masjidil Haram*, but in this study I am of opinion that *Masjidil Haram* covers an area around the Mosque.

A calculation can be made on the days of the pilgrimage in Medina and Mecca. If in Medina the pilgrims do *sholats* continually for 8 days in *Nabawi* mosque, it is equivalent to 8000 days or 21.9 years. Meanwhile in Mecca, if the *sholats* are continuously done (some pilgrims cannot do it due to various factors, such as the distance from the dormitory to the mosque) in *Masjidil Haram*, the *sholats* are equivalent to $25 \times 100,000 = 2,500,000$ days or 6849.3 years. If continuous *sholats* can be done in the two places, they equal to the *sholats* for $6849.3 + 21.9 = 6871.2$ years.

The results of the calculation show that if one who has a pilgrimage always does obligatory *sholats* in the two places as stated by *Rasulllah*, the value of the *sholats* is equivalent to the obligatory *sholat* for 6871,2 years. If the average age of Indonesia

person is 68 years, the *sholats* during the pilgrimage equals to 100 times of human age.

Moreover, if the *sholats* are done in groups, the level of the *sholats* done in *Nabawi* mosque and *Masjidil Haram* mathematically are *Nabawi* $8 \times 5 \times 27 \times 1000 = 1.080.000$ and $25 \times 5 \times 27 \times 100.000 = 337.500.000$, respectively, amounting 338.580.000 (three hundred and thirty eight million, five hundred and eight thousand) which is higher than those done in other places, which is merely 4.455 (four thousand, four hundred and fifty five). In other words, *sholats* in groups in the two places during the pilgrimage had a value of 76,000 times than in other places.

The second dimension is the infinite value, as stated in the *Hadits* *Abu Hurairah*.a, stating "I hear *Rassulullah SAW* stating: "Anyone who does pilgrimage, then he does not do any sin and wickedness, he must be clean from any sins as he was newly-born by his mother".

The mathematical analysis is merely a description and interpretation of a calculation in terms of the merits equivalence human beings obtained when they do pilgrimages, as stated in the *Hadits*. It does not mean that what one's done may erase his obligations, due to *sholats* made that are more than 100 times of his age, and also obligatory *sholats* in groups which results in 76,000 times in merits than those done in other places. Such a condition may be obtained if one does *sholats* just for getting His blessings, and does a pilgrimage just for obtaining his acceptance.

In a *Hadits* as told by *Bukhori* and *Muslim*, it is stated that there are three levels of haj status, namely *mabrur*, *makbul* and *majhul*. The word *mabrur* means getting virtues or trying to become better. It is the predict of haj that is really accepted by *Allah SWT*. It means that after doing a pilgrimage, each behaviour and attitude in one's life is intended to get His blessing, while elaborating good relationships either horizontally (with creatures) or vertically (with *Azza*).

The prophet *Muhammad SAW* has seriously warned that if a moslem does any good deeds without any awareness and understanding, he will not get any merits as promised by *Allah SWT* as the mathematical calculation shows. It is indicated by the fact that when a haj has returned to his/her home town, and he has done anything which is not intended by the *Allah SWT* and he does not understand his status as a haj, his/her haj is merely a ritual, without any meaning in reality.

Conclusion

The place is one of factors that influence the levels of quality in a pilgrimage. It is widely known that *multazam* is the best place for conveying any request to *Allah SWT*, moreover, for *sholats* the best place are *Nabawi* mosque and *Masjidil Haram*. Mathematically, doing *sholats* for 8 days in *Nabawi* mosque is equivalent to 1.080.000 than in other places, except in Mecca, meanwhile *sholats* in *Masjidil Haram* for 25 days equal to 337.500.000 than in other places, except Medina. If the *sholats* done during the pilgrimage in the two places are made in groups, the merits are 76.000 times than those made in other places, except Medina and Mecca.

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Global Journal of Pure and Applied Mathematics. ISSN 0973-1768 Volume 11, Number 6 (2015), pp. 4919-4922 © Research India Publications <http://www.ripublication.com> A Mathematics Dimension of Pilgrimage Akhu' Mathematics Education, University of Muhammadiyah Malang Indonesia Email: ahsanul_in@yahoo.com Abstract The concept of number in mathematics related to a calculation may be grouped into two, namely finite and infinite.

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4922 An' References

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